

NORTH DAKOTA UNIVERSITY SYSTEM
CONNECTND STUDENT ADMINISTRATION
Grand Forks, North Dakota

INFORMATION SYSTEM AUDIT
For the Fiscal Year ended June 30, 2006

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TRANSMITTAL LETTER

September 13, 2006

The Honorable John Hoeven, Governor
Members of the North Dakota Legislative Assembly
Eddie Dunn, Chancellor, North Dakota University System

Transmitted herewith is the information system audit of ConnectND Student Administration for the fiscal year ended June 30, 2006. This audit resulted from the statutory responsibility of the State Auditor under NDCC § 54-10-01.

ConnectND Student Administration is a comprehensive web-based student information system. It records information such as student records, financial aid, and financial information (i.e. tuition, fees, and receipts).

ConnectND Student Administration was selected for this audit because it is considered a high-risk information system. ConnectND Student Administration is considered a "high-risk" information system because it is a relatively new system and is the system North Dakota University System institutions use to maintain student information. ConnectND Student Administration includes student financial information which integrates into ConnectND Finance, the statewide accounting system. The term "high-risk" does not necessarily indicate that the system has problems, but indicates a higher potential for significant problems to occur.

Inquiries or comments relating to this audit may be directed to Donald LaFleur, Information Systems Audit Manager, by calling (701) 328-4744. We wish to express our appreciation to the North Dakota University System for the courtesy, cooperation, and assistance provided to us during this audit.

Respectfully submitted,

Robert R. Peterson
State Auditor

EXECUTIVE SUMMARY

The North Dakota University System (NDUS) implemented PeopleSoft's student administration solution as part of the state's overall implementation of PeopleSoft's human resource, financial, and student administration enterprise solutions.

ConnectND Student Administration (System) is a comprehensive web-based student information system. It records information such as student records, financial aid, and financials information (i.e. tuition, fees, and receipts). It is utilized throughout the student's academic career from recruiting to graduation.

NDUS first implemented the System as a pilot project at Mayville State University and Valley City State University in the fall of 2003 and rolled it out to the other NDUS institutions upon the successful implementation of this pilot project. The System was implemented at all institutions by July 1, 2005.

The implementation of the System is complete and the System appears to be delivering the intended results.

Audit Objectives and Significant Recommendations

We reviewed **security** roles to ensure they had been properly designed and superuser accounts to determine if they were necessary. We had the following findings:

- Social security numbers are displayed throughout the System.
- NDUS is not requiring password changes on nonstudent accounts.
- Information on certain screens is not restricted to a user's institution.
- There are not regular reviews of default and superuser accounts.

We reconciled **student financials** information within the System and to the state accounting system. We had the following findings:

- Credit card numbers were entered and stored in the System.
- The student financials accounting line table did not agree between the System and the state accounting system.
- Effective dates were backdated on the GL interface table in the System.
This caused the GL interface table to not reconcile to the student financials accounting line table.

We reviewed **enrollment** reports from the System. We had the following finding:

- Effective dates were backdated on the System for classes dropped.

We reviewed the adequacy of student administration **policies/procedures**. We had the following findings:

- NDUS has not developed a formal contingency plan for the System.

- NDUS does not have comprehensive documentation of policies and procedures for the System.

BACKGROUND INFORMATION

System Overview

The Campus Solutions Module, formerly known as Student Information Systems, offers a comprehensive web-based solution for students, faculty, and staff. The modules contained within Campus Solutions are:

- Recruitment
- Admissions
- Campus Community
- Student Records
- Transfer Credit
- Student Financial Aid
- Student Financials

In addition, the NDUS has added a room scheduling program called Ad Astra and soon will add a web-based credit card system offered through Touchnet.

The web-based system is generally the first line of contact for new and returning students via the ConnectND Portal. The recruitment and admissions module is the first point of contact a potential student has with the NDUS Institutions. The recruitment/admissions module is designed to attract, communicate, recruit, admit, and matriculate students to allow them to begin the process of enrollment at their chosen Institution.

The recruitment/admissions module provides an on-line admission application that allows potential students to apply to one, or as many as 11, of the State Colleges and Universities from one single point of contact. It allows recruitment officers to enter data on prospective students, track their interests (both academic and extra curricular), keep track of educational data, offer and track scholarships, bill students for application fees, communicate (using campus community) with the students, track student letters, calls, and personal visits, assign required admission data, and setup and carry out recruitment campaigns such as high school visits.

The Student Records/Academic Advisement/Transfer Credit Module (SR) is the heart and soul of the entire PeopleSoft Campus Solutions System. The Student Records module tracks programs and plans (majors and minors) using Academic Structure setup. Changes, additions, or deletions of programs and plans are made in the Student Records module. The Student Records module also contains the campus catalog as well as the term schedule for each of the 3 terms offered by the campuses. The Student Records module offers a web-based registration system for students, web-based class roster access and grading for professors, and a web-based administrative system.

Student Records is the module where student enrollment appointments are made, a student is activated for a career, program, or plan, students are wait listed for overfilled courses, transcripts are created, and Federal Right to Know cohorts are created.

It is in the Student Records module where students can add or drop classes (although a total withdrawal from the campus is not permitted), view and search for open courses or courses that they need for their degree program, view their class schedule, or view a weekly schedule.

Administratively the Student Records module provides for automated transfer credit between the 11 Institutions of the North Dakota University System which makes the process of transferring easier than in the past. Student Records provides necessary Federal Reporting such as IPEDS and National Student Loan Clearinghouse. Additionally, PeopleSoft allows for the student's academic history to be tracked. The new software also automates the process of honors and awards. Three types of transcripts are offered in PeopleSoft: Official, Unofficial, and Academic Advisement. The Official transcript is sent outside the Institution (to transfer Institutions), potential employers, accrediting agencies, etc.). The Unofficial transcript is used by students to track their progress, and the Academic Advisement transcript is used by advisors to assist students in making academic decisions.

In the Student Records module faculty are now able to get real-time class rosters and enter grades at mid-term (some campuses) or end of term. Advisors are provided with access to their advisees official transcript, address data, phone numbers, and a host of other useful data. Both types of grades are available on the portal for students to review.

The transfer credit module is used to enable campuses to determine course equivalencies for courses taken at another Institution. This may be done either manually or through an automated process.

Student Financial Aid will ultimately assist students in funding their education. The Financial Aid Offices work to ensure that recipients of Grants, Federal Works Study programs, Loans and scholarships meet the eligibility requirements laid out by the Federal, State, and Institutional Regulations.

The Financial Aid modules receives ISIR's, has a verification section, builds terms to insure students qualify for assistance, Budgets, Packages, Awards, and Distributes Aid. In addition Student Financial Aid exchanges ISIR date corrections with the Department of Education, NSLDS information with NSLDS, Pell information with COD, originates loans with lenders via Commonline, receives response files from lenders, tracks Federal Work study earnings, transmits Federal Pell originations, disbursements, and disbursement acknowledgements, monitors students for Satisfactory Academic Progress, has the data necessary for completion of the annual FISAP report, identifies students for exit loan counseling, and completes return of Title IV funds.

Student Financials enables Institutions to manage and calculate Student Financial information for each institution. Institutions can calculate Tuition and Fees, bill customers, and issue refunds. The functionality enables Institutions to set up payment plans for students and implement an automated collections process. It integrates with the General Ledger to track and allocate debits and credits for Accounts receivables. Student Financials provides built in tax reporting for both the US 1098T's and Canadian T2202A's. Student Financials also supports 3rd party processing and in the future will have the ability to integrate TouchNet with SF PeopleSoft for on-line payments with Credit/Debit cards and E-check.

Finally the Portal allows all the self-service access for students mentioned above, plus other features. Among those features include: allowing students to update email and residential addresses. Through use of the portal, the student is able to accomplish many tasks on-line rather than having to go to an office.

Financial Summary

Indicated below is a summary of student financials activity processed through ConnectND Student Administration for the fiscal year ended June 30, 2006.

STUDENT FINANCIALS ACTIVITY (expressed in thousands)	
	FY06
Receipts	
<i>Tuition</i>	\$ 152,390
<i>Departmental Receipts</i>	149,867
<i>Fees</i>	29,309
<i>Room & Board</i>	28,100
<i>Aviation Revenue</i>	13,961
<i>Bookstore Revenue</i>	7,109
<i>Nonstudent Revenue</i>	5,860
<i>Health & Childcare Services</i>	3,596
Total Receipts	\$ 390,192
Expenses/Credits	
<i>Financial Aid</i>	\$ 41,810
<i>Waivers</i>	19,753
<i>Bad Debt Expense</i>	156
Total Expenses/Credits	\$ 61,719

Enrollment Summary

Indicated below is a summary of student enrollment figures from the fall 2005 NDUS Third Week Headcount Report.

FALL 2005 STUDENT ENROLLMENT FIGURES		
Institution	HEADCOUNT	CREDIT HOURS
<i>University of North Dakota</i>	12,954	170,882
<i>North Dakota State University</i>	12,099	158,802
<i>Minot State University</i>	3,798	44,706
<i>Bismarck State College</i>	3,370	39,037
<i>Dickinson State University</i>	2,516	30,470
<i>North Dakota State College of Science</i>	2,457	33,346
<i>Lake Region State College</i>	1,471	11,070
<i>Valley City State University</i>	1,035	13,450
<i>Williston State College</i>	947	10,529
<i>Mayville State University</i>	912	10,832
<i>Minot State University Bottineau</i>	523	5,793

OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of this audit of ConnectND Student Administration for the fiscal year ended June 30, 2006 was to answer the following questions:

1. Are security roles designed to provide access based on a demonstrated need to view, add, change, or delete data?
2. Are accounts that have “superuser” access necessary?
3. Does student financial information reconcile within the student administration system and to the general ledger?
4. Are enrollment reports accurately prepared?
5. Are student administration policies/procedures adequate?

This audit was conducted in accordance with *Standards for Information Systems Auditing* issued by the Information Systems Audit and Control Association and *Government Auditing Standards* issued by the Comptroller General of the United States.

ARE SECURITY ROLES DESIGNED TO PROVIDE ACCESS BASED ON A DEMONSTRATED NEED TO VIEW, ADD, CHANGE, OR DELETE DATA?

Summary of Audit Work Performed

We obtained and reviewed a list of ConnectND Student Administration (System) roles and their access rights for the North Dakota University System (NDUS). We reviewed these roles to ensure the access they provided was consistent with their stated purpose. We reviewed default accounts to ensure they were being locked in a timely manner.

Audit Findings

Inappropriate access to Social Security Numbers

Several screens throughout the system display social security numbers. This increases the risk of improper disclosure of Social Security Numbers. The Family Educational Rights and Privacy Act guidelines indicate Social Security Numbers should not be used as identifiers. NDUS collects and uses Social Security Numbers because federal reporting requires the use of Social Security Numbers.

Recommendation:

We recommend NDUS design roles to ensure access to social security numbers is properly restricted.

Agency Response:

The NDUS intends to implement the recommendation within the system limitations. Because of the limitations of the PeopleSoft system, the roles cannot be changed to accommodate this request, but the screens in question can be re-designed to mask the Social Security Number (SSN). Oracle/PeopleSoft offers a method to mask certain fields in the permission lists within the roles, but only if the user has display-only access. In many cases the user needs to be able to create or update records containing the Social Security Number, which invalidates the masking. The Functional Leads for each module will evaluate the screens involved and submit an approved development request to have the screens modified to mask the SSN.

Password changes not required

NDUS is not requiring password changes for non-student accounts in the System. NDUS turned off password change controls for all accounts as student accounts created more of a work load than the help desk could handle. Good security controls include regular password changes to prevent the risk of user accounts being compromised.

Recommendation:

We recommend NDUS require passwords to be changed for non-student accounts every 60-90 days.

Agency Response:

The NDUS intends to implement the recommendation. When the PeopleSoft Student Administration System was implemented, password expiration was in use and set at 60 days;

but because of problems with inconsistency of passwords between the Portal and the Application databases, it was disabled. We have received the code the State uses to extend the expiration date of passwords and are in the process of reviewing it to see what changes need to be made to enable this program to work for our purposes. We hope to have this implemented in the very near future.

Screens not restricted to user's institution

Information on certain screens is not restricted to a user's institution. This increases the risk of improper disclosure of information. NDUS knew of this problem prior to the audit and corrected some screens, but has not reviewed and secured all screens. Access should be provided based on the individual's demonstrated need to data.

Recommendation:

We recommend NDUS secure necessary screens so information is restricted to a user's institution.

Agency Response:

The NDUS intends to implement the recommendation. Delivered functionality of PeopleSoft does not allow for all screens to be restricted by institution. The Functional leads for each module will evaluate the screens involved and submit an approved development request to have the screens modified to restrict by institution. Additionally, we will research the alternative possibility of restricting the institutions at the database level.

Default accounts not locked

Some default accounts delivered with the System were not locked, increasing the risk of unauthorized access. Hackers target default accounts when attempting to gain access to systems. NDUS had not thoroughly reviewed all default accounts. Control Objectives for Information Technology, issued by the Information Systems Audit and Control Association, state management should perform a regular review of all accounts and related privileges.

Recommendation:

We recommend NDUS perform a regular review of default accounts to ensure they are locked.

Agency Response:

The NDUS intends to implement the recommendation. During our periodic review of locked accounts, one of the accounts was thought to be necessary for an automated application process, so it was not locked. We have since locked both default accounts. The default accounts will be monitored monthly to ensure that they are locked.

Auditor's Opinion

In our opinion, security roles provide access based on a demonstrated need to view, add, change, or delete data, except as noted above.

ARE ACCOUNTS THAT HAVE SUPERUSER ACCESS NECESSARY?

Summary of Audit Work Performed

A superuser account has access to all or nearly all ConnectND Student Administration functions and data, or one that can modify security rights.

We created a query to pull all accounts with superuser access. We reviewed the list of accounts with superuser access to determine whether this access was appropriate.

Audit Findings

Inappropriate superuser account

One individual with superuser access no longer required that level of access, causing information and processes not necessary for the individual to be available to him. NDUS lacks procedures to regularly review superuser accounts. Control Objectives for Information Technology, issued by the Information Systems Audit and Control Association, state management should perform a regular review of all accounts and related privileges.

Recommendation:

We recommend NDUS perform a regular review of superuser accounts to determine if they are necessary.

Agency Response:

The NDUS intends to implement the recommendation. Our current practice has been to wait to be notified by the super user's supervisor when the user no longer needs the access or is no longer employed. In the future, we will review the super user accounts monthly and verify with the supervisor(s) that the user should retain the super user role.

Auditor's Opinion

In our opinion, except for the individual noted above, all accounts that have been granted superuser access are necessary.

DOES STUDENT FINANCIAL INFORMATION RECONCILE WITHIN THE STUDENT ADMINISTRATION SYSTEM AND TO THE GENERAL LEDGER?

Summary of Audit Work Performed

We reconciled transactions from the source tables in ConnectND Student Administration (System) to the student financials accounting line table. We also reconciled the student financials accounting line table from the System to ConnectND Finance, the state accounting system.

In addition to these reconciliations, we reviewed storage of credit card information in the System.

Audit Findings

Credit card numbers inappropriately stored

Schools inappropriately enter and store credit card numbers in the System, increasing the risk of credit card fraud. Payment Card Industry Data Security Standards which apply to merchants accepting credit card payments state that a merchant has the duty to protect stored data relating to such payments. NDUS does not have a formal policy against storing credit card numbers.

Recommendation:

We recommend NDUS develop a formal policy to ensure credit card numbers are not stored in ConnectND Student Administration.

Agency Response:

The NDUS intends to implement the recommendation. HECN staff will perform edit checks via a SQL query periodically to ensure credit card numbers are not fully entered. HECN is currently planning to delete all stored credit card numbers. HECN will emphasize that credit card numbers are not to be fully entered into the system during the receipting process. In addition, the campus controllers have asked the Bank of North Dakota to provide training in credit card security to ensure the staff are properly following security regulations.

Accounting line table does not agree to state accounting system

The student financials accounting line table in the System does not agree to the corresponding accounting line table in ConnectND Finance. The table in ConnectND Student Administration is not always updated when the posting process runs. Queries and reports based on the accounting line table in ConnectND Student Administration may not be reliable. The North Dakota University System lacks a reliable process to detect errors. Adequate controls should be in place to ensure that work performed is routinely verified.

Recommendation:

We recommend NDUS implement a reliable process to ensure the accounting line table reconciles between ConnectND Student Administration and ConnectND Finance.

Agency Response:

The NDUS has implemented the recommendation. Student Financials and Finance have matching queries that should return the same accounting data. Student Financial users have been encouraged to run query SF0046 every day to insure that accounting lines have interfaced to the GL. Finance users have been encouraged to run query GL05 to insure accounting lines reconcile with the Student side. In addition, users will be reminded of the importance of these reconciliations at an upcoming meeting of the Finance and Student Finance User Groups.

Backdating effective dates in GL interface table

Schools backdate the effective dates on the item GL interface table. Because of this, the item GL interface table cannot be reconciled with the accounting line table. The North Dakota University System lacks edit checks to prevent backdating of effective dates. Data entered for processing should be subject to a variety of controls to check for accuracy, completeness, and validity.

Recommendation:

We recommend NDUS implement controls to prevent backdating of item GL interface effective dates.

Agency Response:

The NDUS intends to implement the recommendation. The first day of the fiscal year should always be entered on the Initial tab (first tab), otherwise the item type will not post. The actual current date should be entered on the GL tab (last tab) as the GL effective date needs to reflect the actual current date. HECN will make every effort to train users and update training documents on the proper dates to use when setting up new item types.

Auditor's Opinion

In our opinion, except for errors noted above, student financials information reconcile within the System and to the general ledger.

ARE ENROLLMENT REPORTS ACCURATELY PREPARED

Summary of Audit Work Performed

We reviewed the third week enrollment reports prepared by NDUS institutions. We reconciled the enrollment tables in ConnectND Student Administration to the third week enrollment reports. We also reviewed data relating to dropped classes in the enrollment tables.

Audit Findings

Backdating effective dates for dropped classes

The date schools entered dropped classes into the system and the effective date for those drops did not always agree. The effective date is sometimes 6 months or more prior to the entered date. NDUS lacks controls to prevent backdating dropped classes. This could misstate the third week enrollment reports and could cause financial aid to not be properly disbursed. Data should be entered timely and accurately to ensure reliability.

Recommendation:

We recommend NDUS strengthen controls to prevent backdating the effective date when a class is dropped.

Agency Response:

The NDUS intends to implement the recommendation to limit, but not prevent, backdating the effective date. Fall 2005 was the first term that four of the campuses used the student system. In addition, many of the campuses were not aware of the drop at 100% capabilities of PeopleSoft until the spring 2006 term. Since then, campuses have learned about the drop process and backdating of drops and withdrawals has been greatly reduced.

Representatives from the System Office and the 11 campuses met recently to discuss enrollment policies and procedures, including backdating drops and withdrawals. The discussion on the backdating issue centered on the legitimate instances where a record may be backdated to reflect a 'No Record Drop' (e.g. student petition approved by a campus committee or students pre-registered as an undergraduate and then accepted as a grad student). The group agreed to define those situations when backdating is appropriate, and review and modify the board policies and procedures, accordingly.

Auditor's Opinion

In our opinion, the enrollment reports are accurately prepared.

ARE STUDENT ADMINISTRATION POLICIES/PROCEDURES ADEQUATE?

Summary of Audit Work Performed

We reviewed the documentation of policies and procedures NDUS has for ConnectND Student Administration (System).

Audit Findings

No formal contingency plan

NDUS lacks a formal contingency plan for the System. As a result, NDUS may not be properly prepared for contingencies. In July 2002, Governor John Hoeven directed all state agencies and facilities to develop business continuity/disaster recovery plans. NDUS gave higher priority to other concerns during implementation.

Recommendation:

We recommend NDUS develop a formal contingency plan for ConnectND Student Administration.

Agency Response:

The NDUS intends to implement the recommendation. The NDUS has given high priority to the implementation of ConnectND, but we have left to accomplish many of the related services. The recently hired ConnectND Executive Director has agreed to help the Student Administration Data Center leadership acquire the necessary people and financial resources to provide and/or develop additional services, including a formal contingency plan.

Inadequate written policies and procedures

Documentation for the System consists primarily of screen navigation. Controls may not be applied consistently or effectively across institutions. Comprehensive documentation should include business processes and controls surrounding a system, as well as screen navigation.

Recommendation:

We recommend NDUS develop comprehensive documentation which outlines policies and procedures to be used by all universities. At a minimum, documentation should address proper internal controls and compliance with state law and NDUS policy

Agency Response:

The NDUS intends to implement the recommendation. We are currently reviewing and updating, as time permits, all system documentation to fit the way the system and policies were established. Each campus will be responsible for updating documentation to accommodate their unique business practices. With a major upgrade just ahead, our effort will be focused on ensuring the documentation for the upgrade meets audit guidelines.

Auditor's Opinion

In our opinion, the policies and procedures surrounding the System are **not** adequate.